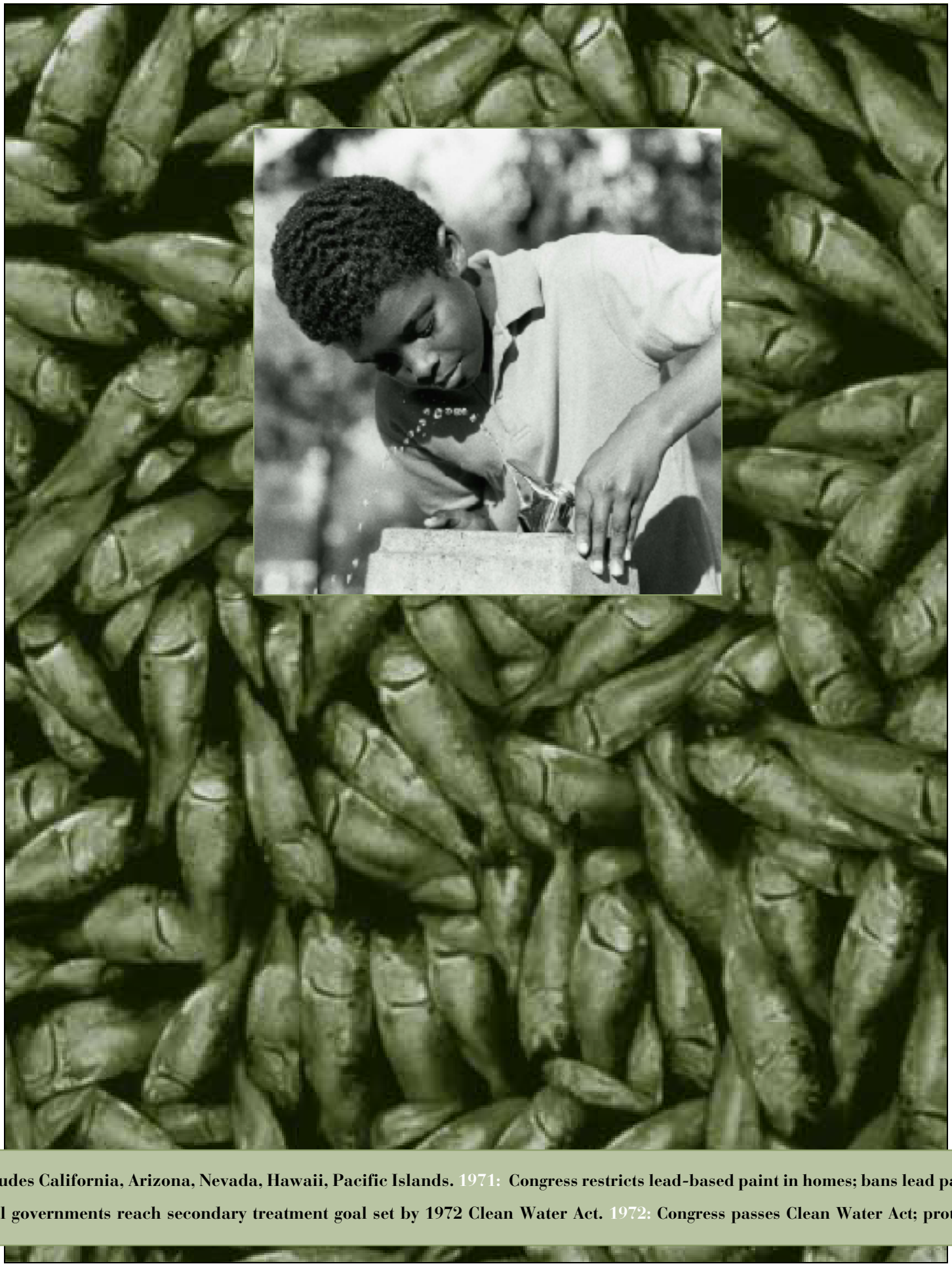


includes California, Arizona, Nevada, Hawaii, Pacific Islands. 1971: Congress restricts lead-based paint in homes; bans lead paint local governments reach secondary treatment goal set by 1972 Clean Water Act. 1972: Congress passes Clean Water Act; protects

CLEAN WATER

Keeping our water swimmable and drinkable

The Clean Water Act, approved by Congress in 1972, has a simple goal: making waterways safe for fishing and swimming. But getting there hasn't been easy. In 1972, San Francisco's Bay and beaches were fouled by raw sewage after every rainfall. Phoenix's Salt River, normally dry most of the year, had constant flows of inadequately-treated sewage. Oahu waters near sewer outfalls were a far cry from paradise.

From the early 1970s through the 1980s, EPA grants financed up to 75% of the cost to upgrade sewage treatment facilities. By 1989, in the Pacific Southwest, EPA had invested over $6 billion in these projects. Since then, EPA has made loans available through its State Revolving Fund, administered by the states.

The results have been dramatic. Pollution loading to San Francisco Bay has declined by 85% since the 1960s. The Reno-Sparks Treatment Plant cleaned up the Truckee River downstream from Reno, NV. Sewage outfalls no longer pollute Southern California beaches. Rivers and streams throughout Indian Country flow cleaner and drinking water sources are far better protected.

Yet big problems remain. Recent studies show that bacteria from polluted runoff entering storm drains and creeks is making surfers and swimmers sick. Sediment and algae still clog many waterways, robbing oxygen that fish need to survive. Toxics like DDT and mercury persist for decades, reaching unsafe levels as they move up the food chain, and requiring fish consumption warnings to be posted at some public fishing piers.

Making beaches safe

Until last year, **Imperial Beach** south of San Diego was routinely contaminated with Tijuana's raw sewage. In 1998, the beach was closed on 161 days. But in 1999, beachgoers enjoyed an eight-month-long closure-free season for the first time in over 20 years, thanks to the new **International Wastewater Treatment Plant** (IWTP), which reached full capacity at advanced primary treatment levels in early 1999. Construction was funded by EPA ($230 million), California ($16 million), and Mexico ($9 million). EPA and the International Boundary Water Commission are now working to expand the facility to provide full secondary treatment.

At **Santa Monica Bay**, beach lovers in 1999 benefited from Los Angeles' completion of a decade-long series of improvements to the city's massive **Hyperion** sewage treatment plant. The upgrades, mandated by a 1986 legal settlement with EPA, reduced sewage sludge discharges to the bay by 90 percent – and fostered an historic partnership

on cribs and toys. EPA begins issuing sewage treatment construction grants totalling $6 billion in Pacific Southwest by 1989; helps wetlands, gives EPA authority set water quality standards, penalizes polluters. EPA bans DDT. California voters pass Coastal

between the city government and local environmental groups.

On the Hawaiian island of **Maui**, poor maintenance of sewage treatment facilities in the 1990's resulted in hundreds of sewage leaks onto land, streets and streams, in some cases contaminating beaches. In 1999, EPA and the State of Hawaii reached a settlement with Maui County ensuring better maintenance to prevent sewage spills. Maui also agreed to undertake a $600,000 project to expand the use of treated wastewater for irrigation, thus extending the island's limited supply of fresh water. EPA settled a similar case with Oahu County in 1994.

Despite such improvements, bacterial pollution shut down Huntington Beach, CA for much of the summer. Closures like these are now usually the result of polluted runoff. As EPA and the states work to prevent polluted runoff, beachgoers can avoid contaminated areas by checking EPA's Beach Watch web page, ***www.epa.gov/ost/beaches***. EPA has worked with Southern California environmental groups, the state, and local governments to achieve more frequent, consistent beach water sampling, and increased monitoring of ocean waters and marine life.

Controlling polluted runoff

Sources of polluted runoff include farms, logging and construction sites, roads and streets, yards and driveways. A ton of cow manure here, a gallon of crankcase oil there, it all adds up – especially with millions of cows and millions of cars. Such waste must be managed properly to keep it out of waterways.

California is the nation's biggest producer of dairy products, and the state's dairy cows generate about 30 million tons of manure annually – nearly a ton for every person in the state. Manure can pollute streams and groundwater, killing fish and contaminating drinking water sources. EPA took enforcement actions against egregious polluters, but assisted dairy operators who want to do the right thing: EPA funded the University of California Extension's **pollution prevention training courses for dairy operators** (in ten locations around the state) and evaluations of 1,000 dairies for manure management problems. EPA also joined the **California Dairy Quality Partnership**, an effort by government and dairy operators to ensure safe foods and clean water.

Increased monitoring of coastal waters helps protect surfers and swimmers from harmful bacteria.

Everybody's first need: safe drinking water

Preventing pollution – not only of water, but also air and land – is the best way to protect drinking water supplies. This includes proper management of hazardous and solid waste, and protection of wetlands and watersheds that filter out pollutants from runoff.

EPA's efforts to **ensure safe tap water** include: enforcing new underground fuel tank leak prevention rules; requiring polluters to clean up contaminated water sources and, in egregious cases, pay for clean replacement water; working with states, tribes, and water suppliers to prevent pollution from septic systems and clean up tainted water; requiring all public water systems to annually send customers a report disclosing any violations of federal drinking water standards; and providing loans to state and local

Conservation Initiative, limiting coastal development. 1973: Congress passes Endangered Species Act. EPA begins enforcement tion is reduced by 94%. 1974: Southern California scientists publish evidence that chloroflourocarbons (CFCs) destroy earth's

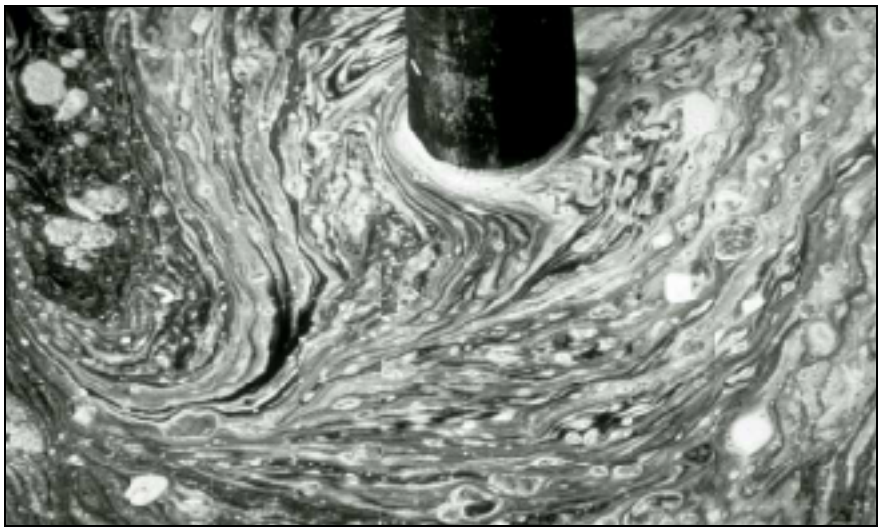
governments for drinking water improvements. By early 2000, these loans totalled $153 million in California, $32 million in Arizona, $27 million in Hawaii, and $27 million in Nevada.

While nearly all public drinking water supplies have remained safe, the discovery of water sources tainted by the fuel additive **MTBE** and **perchlorate** (a component of solid rocket fuel) have sparked public concern. EPA is working to phase out MTBE because it has leaked from underground fuel storage tanks into groundwater, in some cases contaminating public water supplies. MTBE contamination forced **Santa Monica, CA** to shut down drinking water wells that supplied most of the city's water.

Billions of dollars in sewage treatment investments have cut water pollution throughout the Pacific Southwest — for example, by 85% in San Francisco Bay.

EPA and the Los Angeles Regional Water Quality Control Board are taking aggressive enforcement actions against the oil companies responsible

In 1997, the California Department of Health Services developed a method of detecting extremely low levels of perchlorate in water. Traces of perchlorate were found in **Lake Mead**, source of Las Vegas' drinking water, though in such miniscule concentrations that the tap water remained safe. Some of the perchlorate was tracked to a Kerr-McGee Chemical Corp. facility in Henderson, NV. EPA worked with Nevada and Kerr-McGee to build a water treatment system on Las Vegas Wash which has, since November 1999, removed nearly all the perchlorate attributable to the chemical plant. EPA is cooperating with state agencies to track down other sources of perchlorate and develop treatment technologies.



Water protection is more complicated these days, as the sources of pollution from farms to highways to logging sites become more numerous, diverse, and spread-out.

Throughout 1999, EPA worked with the California Department of Health Services and the **Imperial Irrigation District** to provide clean drinking water to nearly 10,000 people who were getting their water from **irrigation canals and ditches,** which are often contaminated with disease pathogens. People living along irrigation ditches in Arizona were also drinking ditch water. EPA, California and Arizona worked with the irrigation districts to pipe in clean drinking water or provide bottled water.

Tribal cooperation

61 Indian tribes in the Pacific Southwest are eligible to receive financial, technical, and legal assistance from EPA for tribal water programs, such as developing water quality standards and preventing polluted runoff. EPA worked closely with the **White Mountain Apache Tribe** (AZ), which adopted standards in August 1999, making it the 14th Indian tribe in the nation to do so. The **Hoopa Valley Tribe** (CA) also has an EPA-approved water quality standards program, and several other tribes in the Pacific Southwest are developing such programs.

against eight Arizona/Nevada copper smelters emitting two million tons of sulfur dioxide (SO2) annually. Ultimately, SO2 pollu-

protective stratospheric ozone layer. 1975: EPA requires new cars to have catalytic converters and use unleaded gas. Lead levels